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SpongeBob SquarePants

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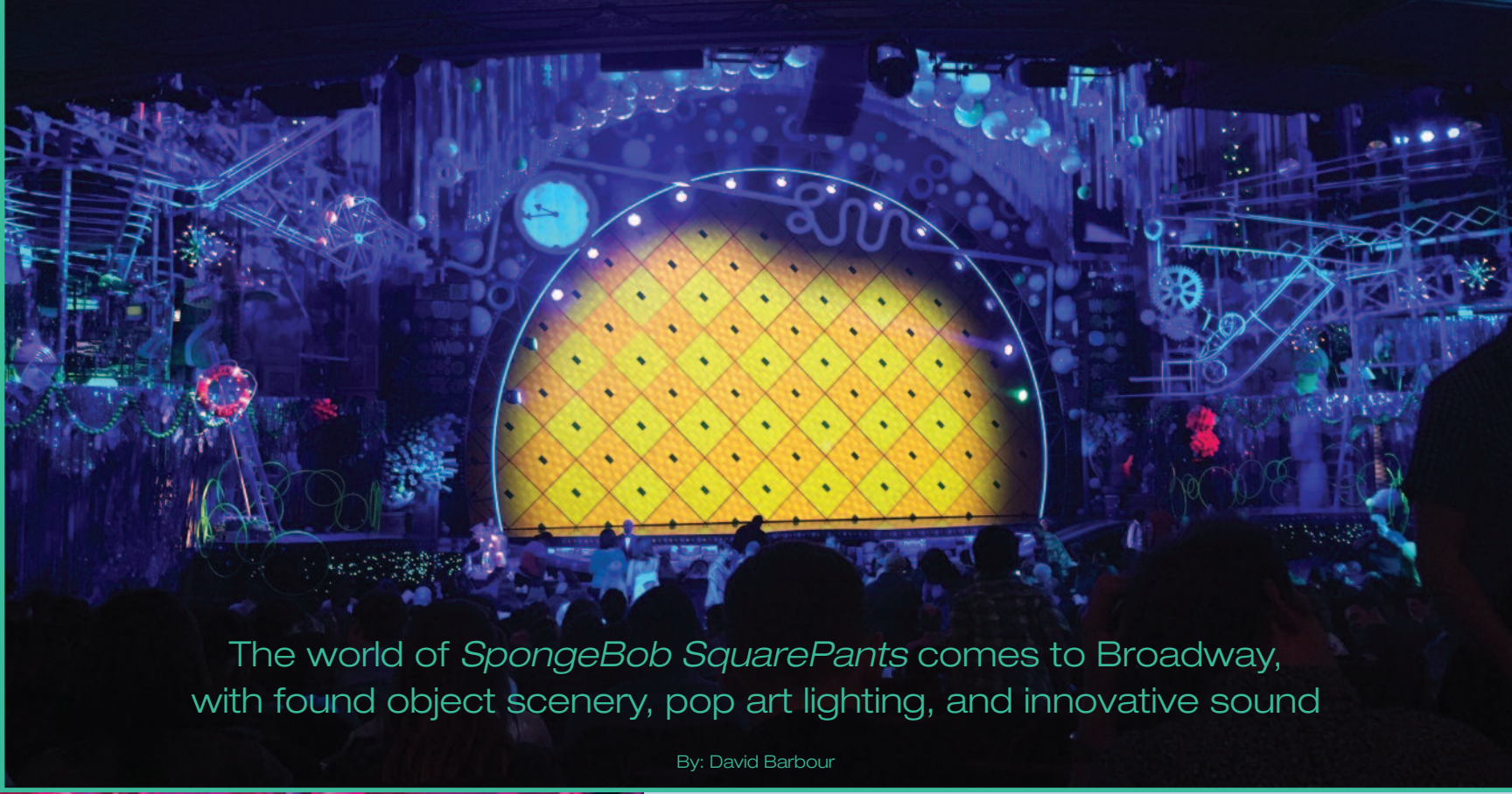


The world of *SpongeBob SquarePants* comes to Broadway, with found object scenery, pop art lighting, and innovative sound

By: David Barbour

Left photo: Joan Marcus; Top photo: David Zinn

Above: The show curtain is rendered in a kind of abstracted pineapple pattern. Left: The onstage looks are relatively spare, to make room for the large cast and choreography.

In news calculated to thrill young children and millennials everywhere, SpongeBob SquarePants, the beloved Nickelodeon character created by Stephen Hillenburg, has established a beachhead on Broadway with his cadre of underwater friends. (The musical opened at the Palace in December.) Joining the implacably optimistic sea sponge are the rest of the crew, including the reliably dense Patrick Star; the scientific-minded karate expert Sandy Cheeks; the irritable Squidward Q. Tentacles; Eugene Krabs, owner of the restaurant The Krusty Krab, where SpongeBob toils, happily, as a fry cook; and Sheldon J. Plankton, owner of the greasy spoon The Chum Bucket, accompanied by Karen, his computer wife.

Kyle Jarrow's book puts Bikini Bottom, the seabed where the characters live, into jeopardy from a belching volcano. SpongeBob wants to rally his fellow citizens to face and solve this existential threat, but they are all too easily manipulated by a corrupt, none-too-bright mayor, who wants to initiate a mass migration via an ill-defined "escape pod." The score is by a pop music Who's Who.

Despite the success of such Disney musicals as *The Lion King* and *Aladdin*, there is no simple formula for realizing animated characters and worlds on stage. Bikini Bottom is especially challenging, given an underwater environment that represents the Great Pacific Garbage Patch and a cast of characters that ranges from the

Squidward has his apotheosis in "I'm Not a Loser," featuring the Bikini Bandshell, a backdrop made of surfboards.

microscopic Plankton to the multi-limbed Squidward. But some keen creative minds have applied their talents to the problem, with spectacular results.

David Zinn's set design turns the Palace into Bikini Bottom: The auditorium is ringed in rain curtains, adding a touch of tinselly gaiety that is accentuated by outbreaks of tubing and giant globes all over the proscenium. Gaggles of plastic cups are arranged in mock starbursts; tiny starburst chandeliers with a distinct 1960s vibe, dangle overhead. Onstage, a passerelle dips in the center, making room for two skateboard tracks. The houselights have been fitted with colored bulbs. Onstage, a two-level struc-

Photo: Joan Marcus

ture, built out of oil drums, provides the basic structure of Bikini Bottom, with at least four portals lined in LED tape.

Right and left of the proscenium are rickety Rube Goldberg contraptions that deliver "boulders"—giant beach balls—in moments of stress. Throw in several tons of confetti and plentiful bubbles and you have the birthday party of any nine-year-old's dreams.

Zinn is the presiding sensibility on the design side, as he has been involved with the project for longer than his colleagues. Nearly six years ago, he was summoned by Tina Landau, who conceived and directed the musical; their process was lengthy and thoughtful. "Every summer, for several years, we met up and did a workshop," Zinn says. "The first one had me, Tina, Ethan [Slater, who plays SpongeBob], Danny [Skinner, who plays Patrick], and other actors. I don't think there was a script at that point. There weren't any songs. The charge of the workshop was: How do you do a cartoon onstage?"

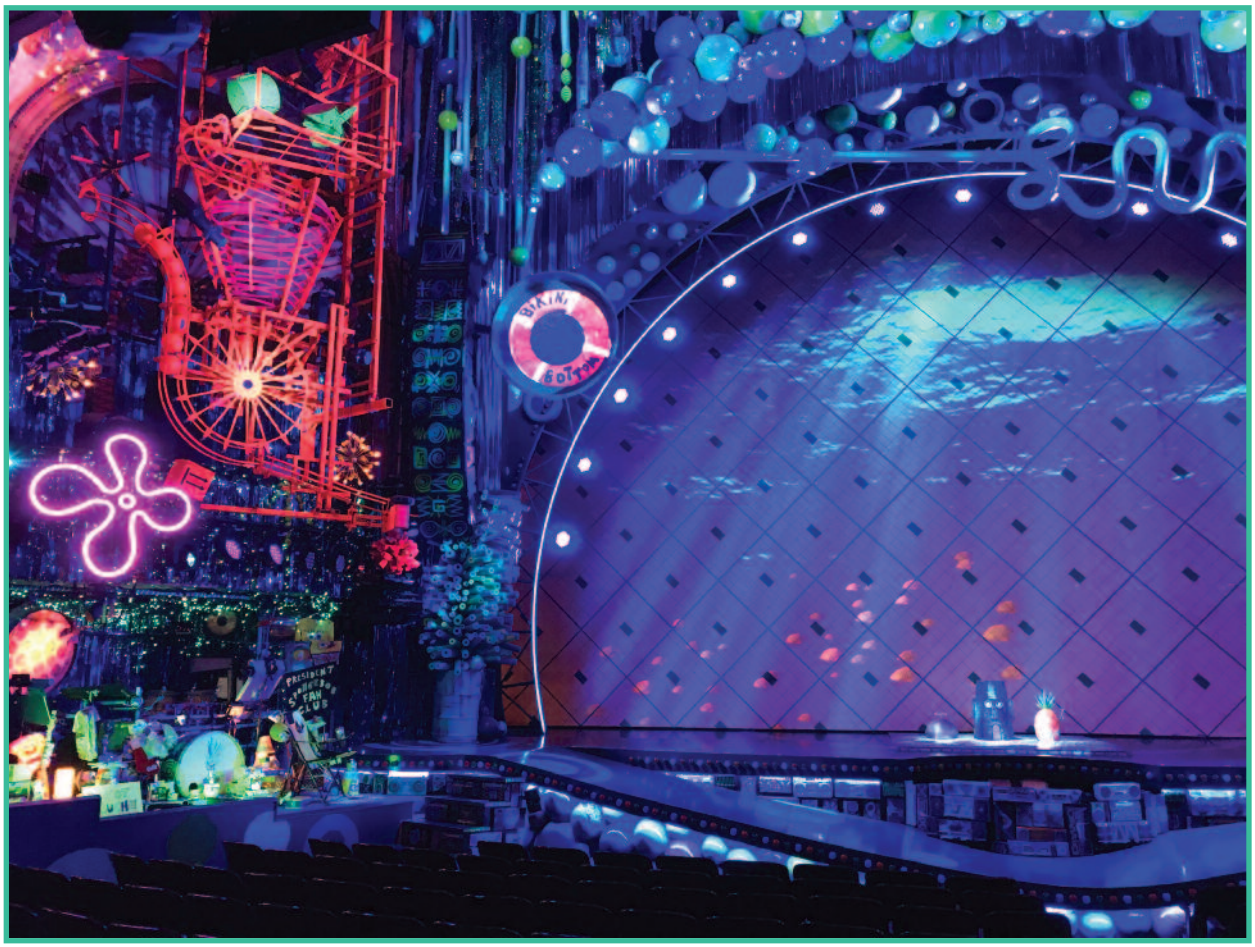
Thus, Zinn says, "We focused on the characters, and movement, and costumes ideas. [Zinn is also the costume designer.] It was about finding a vocabulary and generating these enormous mood boards. Tina and I had never worked together before, but we really mind-melded." Early on, the giddy spirit of the design asserted itself: "For a presentation to producers, I decorated the rehearsal room for balloons and crazy pool toys. I wanted to fill it with a party vibe—and to hint at things that would become part of the world of SpongeBob. For the next three summers, we got together and honed our ideas. During the third summer, Kevin [Adams, the lighting designer] and Peter [Nigrini, the projection designer] came onboard."

The third summer saw a workshop performance of the show, for an invited audience, at Classic Stage Company, a flexible, black-box space on East 13th Street. Zinn says, "I picked a Broadway theatre and used it to build a stunt model, to show how we might implement the design. I used CSC to do a small-scale version of these ideas. The great thing about CSC is we could take over, painting the entire space. A big part of the show's vocabulary got laid out in that workshop."

If anything, the set was bigger during the show's tryout, at Chicago's Oriental Theatre, in June 2016, simply because there was more acreage to cover. "It helped to fill the cavernous depth," Zinn says, adding that the Palace is "a compression" of the Chicago design. It is even more detailed; onstage, it is relatively spare, making room for the cast and Christopher Gattelli's choreography.

The set makes use of all sorts of oddball materials, beginning with pool noodles, cylindrical pieces of buoyant polyethylene foam that are used when swimming. Zinn says, "We charged the guys at PRG [the scenic fabricator] with how to make pool noodles and beach balls flame-retardant. But it was important to use nontraditional materials. The pleasure of it is the dumbness of the materials that we're using. 'Dumb' and 'stupid' are generally positive words for me. Rain curtains are the original stupid. They couldn't be more stupid—or cool."

The Rube Goldberg devices are something of an innovation; Zinn says, "They're in the spirit of SpongeBob. After CSC, when we had the thumbs-up for Chicago, we wanted



One of the Rube Goldberg devices attached to either side of the proscenium. Note also the projection of undersea life on the show curtain.

to dive more deeply into the design. One of the first things I showed Tina was the OK Go video, 'This Too Shall Pass.' [It features a wildly elaborate Rube Goldberg device, lasting nearly four minutes.] It absolutely felt right. We knew how we wanted the machines to function and we turned to some Rube Goldberg engineers—that's really a job title—to figure out how it would function." The Goldberg devices were built by New York-based Prop N Spoon. Soft goods were supplied by iWeiss and Rose Brand. The bulk of the scenery was built by PRG, using the Stage Command automation system.

From the top, one sees a curved portal, behind which is a show curtain, made entirely of kitchen sponges, displaying a kind of abstracted pineapple, a reference to SpongeBob's living space. The curtain rises to reveal the two-level set, with individual locations, such as The Krusty Krab and The Chum Bucket, represented by relatively small tracking units. Near the end, two marquee design items turn up. The first is the Bikini Bottom Bandshell, where Squidward gets his long-awaited moment of stardom in a tap number titled "I'm Not a Loser." The bandshell is a half-circle drop covered in surfboards. An electric sign, spelling out Squidward's name, flies in for the finale. For the climax, Mount Humongous, the volcano, is represented by a pile of cardboard boxes painted red. It parts to show the volcano's interior, represented by an arrangement of ladders in a kind of spider-web pattern.

Echoing every other member of the creative team, Zinn notes that with all this scenery, plus the necessary house lighting, and large line arrays, "There was a fight to the death between scenery, sound, and lights," for every inch of space in the house. (In truth, it sounds as if it was much more good-natured than that; this appears to be a most collegial crew. For example, Walter Trarbach, the sound designer, agreed to let Zinn paint the grilles of many speakers in graffiti patterns. On stage, scenery storage is "bananas," the designer adds. "Every square inch is spoken for. It's really crazy because there are so many enormous quick changes" happening just offstage.

Given the sheer scale of his work, Zinn says, "We knew we had enough when opening night arrived. If the Palace had let us keep going in the lobby, I could have gone on

Left photo: Meredith Ries; Right photos: David Zinn

forever." In any case, his main goal was achieved: "With the big gesture of the rain curtains and the transformed houselights, we made a big enough impact that everybody, whether in the balcony, mezzanine, or orchestra, gets a definitive view of the whole show."

Lighting

Kevin Adams is, arguably, the ideal lighting designer for *SpongeBob SquarePants*, because, among other things, he has a knack for pop-art lighting using bright, bright colors. Nevertheless, the designer notes, he had to marshal his hues carefully: "The set has a slightly more contained palette than the costumes, which are all over the place, color-wise. There all kinds of metallics and lots of DayGlo colors. It was hard at times to pull it all together and make everyone in a cue look good. When the whole cast is onstage, I use a very narrow palette. Many numbers are fronted by one or two characters only, which makes it easier. Each of these numbers is color-coded. Plankton's rap song ["When the Going Gets Tough"] is in green. The David Bowie song ["No Control," which announces the volcano threat] is all in red. I started developing that approach at CSC."

Adams concurs about the lack of space, which put suitable lighting positions at a premium onstage. "In-one is traditional, because it's open to the sides; I can have ladders there," he says. "But upstage is a cave of lines and hoops and things. We put units where we could fit them in. I'd start with an idea for a system, and, turning it on, would find that only fifty percent could get through. One thing that helped was David let me use the hoops on the proscenium." The units on the curved portal are GLP impression X4s. "I start each cue with them," he adds. "Often, they're lighting or backlighting the performers or making graphics in space; sometimes they're pointed at the audience."

The production features several UV effects, especially in the number, "Just a Simple Sponge," and when lighting the set: "In Chicago, the big Rube Goldberg devices weren't DayGlo, and I couldn't separate them out from the theatre. We experimented with parts of them in DayGlo colors; for the Palace, we painted everything in DayGlo."

Speaking of color, in a true sign of the times, Adams notes that there "is not a single scroller in the show. About 65% of every look—on people, scenery, and in the house—involves LED units. At times, they are all LED. Onstage, we have Martin by Harman RUSH PARS, which is what PRG [the lighting gear supplier] had for an LED PAR." He adds, "There a lot of good things about going without scrollers, and some really hard things, too. LED PARs are great for changing colors, but when I need, say, brightness onstage with R51 [Surprise Pink], it's hard to get."

The lighting design is filled with effects—including chases, waves, and rainbows—some of which are hard to distinguish from projections. "We do a lot of work on the cyc with LED strips," Adams says, "and I do a lot with bands of moving color, either rainbows or alternating blues and greens. My programmer, Benny Kirkham, and I spent a lot of time planning them."

Like the set design, Adams' work extended out into the house. "One big task at the Palace was to create the atmosphere in the theatre, and it took a huge rig," he says. "There's a water effect on every surface, especially in the

This array of colorful boomboxes masks the front fill loudspeakers. Trarbach also consented to having the line arrays painted similarly.

This shot, taken during tech, shows the front of Mount Humongous, which is made of painted cardboard boxes.

mezzanine and balcony. We have 14 Rosco X24 X-Effects projectors for that. My associate Jake DeGroot and assistant Barbara Samuels and also had endless meetings about lightbulbs, because we changed out the houselights for bulbs with different colors. We worked with Joe Beck, the house electrician on it. I knew the house manager would require a certain amount of visibility. Also, during the day, there's maintenance to be done and we had to compensate for that."

Adams says, "What turned me on to the project was how different all the songs were. Lighting a rap number is different from doing a ballad or a country song. The Aerosmith number ["Bikini Bottom Boogie"] is really like an Aerosmith song. For the Palace, we added several large, complicated dance breaks, to which we added everything but the kitchen sink." Lighting is controlled by an MA Lighting grandMA2 console. "It's what Benny works on," Adams says. "He has a huge bag of pop and rock tricks and can layer effects very quickly on the console."

The lighting includes 41 VL3500Q Spots, five VL3500 Wash FX units; 56 GLP impression X4s, eight Martin by Harman MAC Quantum Washes, 108 ETC Source Fours, 50 Source Four PARs, 57 Source Four Series 2 Lustrs, 110 Martin by Harman RUSH PAR 2s, 21 Elation Professional SixPar 200s, 14 Rosco X-Effects Projectors, 12 Chauvet Professional COLORdash Accent Quads, 26 Chroma-Q Color Force 72s, 86 Philips Color Kinetics ColorBlast 12s, five TMB Solaris Flares, 12 Rosco Miro Cube 4Cs, eighteen 7" red police beams, four Claypaky Sharpy Spots, three Lycian 1295 followspots, 18 Antari B-200 bubble machines, three MDG Atmosphere hazers, six RSC Lightlocks, 12 Antari W-715 Fog Jets, ER Productions LaserBlade red laser effects, ETC Sensor racks, and PRG S400 power/data distribution racks. Also used are 500 Environmental Lights RGB PixelPro LED Bullets, and "yards and yards" of LED tape, plus hundreds of chasing lightbulbs, hundreds of feet of green and blue LED rope light, and light-up construction arrows, and traffic wands.

Adams' lighting maintains a bright, pop-art sensibility to match the scenery and costumes.

Since everyone in the cast wears a wig, Trarbach says that hiding mics was relatively easy.

Overall, Adams says, the challenge was "the scale of every cue, the acreage that has to be considered and the layers and layers of details that illuminate in that acreage. It was, by far, the largest rig I've ever used."

Projection

Peter Nigrini, the show's projection designer, came onboard when "I was asked about covering the theatre with water in the pre-show, setting a tone for the production. Beyond that, we all felt there was something for me to do, but exactly what remained a mystery. At CSC, something happened; there's a single line at the end of Act I, when the French narrator says, 'Night falls.' I added a simple, ripped-off-from-Looney-Tunes gesture, where a night scene 'falls in and does a little inertial bounce off the ground. It was an eye-opener for Tina, and a moment of

Sheldon Plankton and company in "When the Going Gets Tough." Adams says, "What turned me onto this project was how different the songs were. LIghting a rap number is different from a ballad or a country song."

discovery for me. It offered a way to bring something of the animated world to what we were doing on stage."

Among the video elements added are a series of news broadcasts, providing updates about the volcano threat and Bikini Bottom's response to it, he says, "culminating in the scene we call 'Bikinitevka,' the video of the citizens of Bikini Bottom fleeing. It's there partly because we needed 38 seconds for an almost-full-cast costume change. This was only one strain of ideas that we threaded through the show. In *Dear Evan Hansen* [his previous Broadway project], my work was about creating an entire world of social media. Here it was about adding various disparate threads to the production."

Finding projection surfaces on Zinn's design was difficult, "but that's in keeping with the nature of the material," Nigrini says. "There's a sort of maximalist requirement for the set; crowding was the goal. The approach of leaving room for projection in the design, which is often the right way to go, wouldn't be right here." Indeed, it is sometimes difficult to tell if an effect is projection or lighting. Calling projection "hyperarticulate lighting," he gives as an example the climax of "I'm Not a Loser," when waves of light move up the surfboards in the upstage drop. "You should be thinking that maybe the surfboards are lightboxes, or even better perhaps, not thinking about it at all," he adds.

"One discovery for me was the opening number, before the show curtain goes up," Nigrini says. "The biggest challenge was bringing an audience to our view of this world. We train them how to come on this journey. In our world, these pool noodles are kelp, these Dixie cups are coral, and this guy in a yellow shirt is SpongeBob. Half of the opening number is in-one, in front of the show curtain; the graphic stripes projected there establish a two-dimensional cartoon sensibility, before you are introduced to our Bikini Bottom in three dimensions. Here we are all working to bring the audience in and get them onboard."

The production's video content is delivered via four disguise 2x4pro media servers and a system of Panasonic Sold Shine laser diode projectors. "In addition to a pair of Panasonic PT-RZ31ks, we also have three Christie S+14K

Photos: Joan Marcus

M-Series projectors on the mezzanine rail," Nigrini says. "Their ILS lens control system recalls precise lens zoom and position information, allowing us to refocus those projectors throughout the show. We also use a BlackTrax [real-time tracking system] to deal with various bits of moving scenery. For example, in 'No Control,' a kiddie pool gets waved around and we're tracking it. And there is a portal of portholes, two of which are actor-operated. and we project on them. Anything that is not actor-motivated, we are tracking with data from PRG Stage Command. In addition to the projectors on the front-of-house rails, there are six Panasonic PT-RX110s onstage, hidden in towers made of 55-gallon drums for Mount Humongous. These transform a scenic wall of dimensional boxes in 'Chop to the Top' {when SpongeBob is climbing the mountain], into a 3D fly-through of the climb up the volcano and, later, a forest of ladders approaching the volcano's interior."

The disguise media server is hooked up to the grandMA2 console. "Ninety percent of the video cues are triggered by lighting," Nigrini says. "But there are also time-code sections, triggered by the music director [Julie McBride]. And we receive MIDI notes from Mike Dobson [the Foley artist]. This tight integration with sound is critical to the feel of the production; for example, when Mike creates the sound of SpongeBob's footsteps, we can hang an event on each step. Tina really pushed the idea of liveness. Near the end, when SpongeBob is taking a series of steps forward, he hesitates for second before the last step. The alchemy of that step and its sound effect is tied to the temperature of the room. Tina was insistent on the actors having agency, which led to having a Foley artist and to big bits of scenery that the actors move around onstage. That's why we needed BlackTrax. A lot of the technology flowed from the basic idea of handmade-ness that Tina wanted." Projection gear was supplied by WorldStage.

"The greatest joy was getting to spend time with the comedy of it," Nigrini says. "It's not that common to spend that much time dreaming up jokes. "It was a peek into the writers' room on a situation comedy. That's often not our stock in trade."

Sound/Foley effects

Walter Trarbach, the production's sound designer, says he took into account the score's varied styles. "We had a system that accommodated rock numbers but also provided low frequency for hip-hop numbers and was able to handle orchestral strings. The best thing we could do for the sound was level it out and respond to what the musicians were doing. We let them be in charge of it." The 15-person ensemble is split up, with some musicians in the pit and guitars and keyboards in the house, at stage left. To keep everything blended, Trarbach notes, "Everyone has [Aviom] personal mixers, and all locations have talkback microphones, so they can communicate. With musicians sitting downstage of the loudspeakers, we had to be conscious of mic feedback."

The loudspeaker hang includes d&b audiotechnik V8s and V12s. "Basically, this system covers the second row of the orchestra to the top of the mezzanine. My associate, Drew Levy, works for d&b, and he used [the company's] ArrayCalc [simulation software] to map out the space. Our center array is made up of Meyer Sound MICAs." Front fill is handled by a set of d&b E5s. "Because the front of the stage is decorated with boom-box parts, it was the easiest task to hide my speakers," the designer laughs. Underbalcony coverage consists of two rows of delays: one of V8s and one of E6s. The surround system consists entirely of E6 units. Foldback consists of two Meyer Sound UPA-2Ps and L-Acoustics MTD108Ps.

Because of the stage's configuration, Trarbach says, "We have actors standing in front of speakers all the time. We came up with a strategy for combatting it; basically, we have four parallel groups. Our normal group is matrixed to the speakers, with another group for downstage of the proscenium on the house left side; the bottom box on that side goes off and the box above it drops 4dB. We do similar sets for left right and the middle of the passarelle."

Even with such a fancifully imagined cast of characters, Trarbach says that mic placement "wasn't difficult at all, and I have to credit David Zinn. The principals don't wear hats, and they all have wigs," allowing mics to be fitted and kept out of sight. "We started with [Sennheiser] MKE2s and, over the course of time, moved to MKE1s, because they're smaller." Sennheiser SK 5212-II mini transmitters are also used. Audio gear was supplied by PRG.

As mentioned, the show makes extensive use of Foley effects. Mike Dobson says, "Tina was interested in having Foley early on; she reached out to me for the workshop in 2012. My background is in percussion. I'm the only band member sitting in a box. Walter put in a scheme by which we could all communicate with each other." The effects, he adds, "consist of a combination of things. I use traditional percussion: The same cowbell is the sound of someone getting hit. I also use found objects, like a trash can, along with genuine Foley instruments. I'm running Ableton Live and I use a little Novation Launchpad to trigger effects that are stored in Ableton. I also trigger QLab to make huge rumbles for the volcano. The Ableton system is mainly for things that are indeterminate, like the number of steps SpongeBob takes across the stage. The Qlab cues are in a cycle." Among the most amusing of the Foley effects is the whooshing sound of Sandy Cheeks' nunchucks, which are perfectly timed to the movements of actress Lilli Cooper.

Two consoles—a DiGiCo SD7 and SD10—are required: "We ran out of space," Trarbach says, simply. "Mike has the Ableton rig, which he controls with a touch pad," he adds. "SpongeBob's footsteps are mapped to pan across the house with him. Mike also has a 'go' button that fires

The basic stage look features the upstage curved portal and a second level supported by oil drums.

Photo: Joan Marcus

our QLab at the console. And some effects, including the narration, are triggered by the lighting console. We communicate with the grandMA2 in three ways. It receives MIDI Show Control from QLab at the front of house. It also receives MIDI notes from Mike's Ableton rig. The lighting console also sends MIDI Show Control to the sound system, because some sound effects are taken from lighting. We also send a lot of SMPTE time code to the video department. And for Karen, Plankton's computer wife, we send an audio signal to video—it's a split from the actress' microphone—and they process it drastically, to make it like a sine wave." Commenting on all these interconnections, he adds, "We're fortunate that we workshopped the show a bunch of times and then took it to Chicago, because there are situations in which one department has to trigger every other department; we could decide who was in charge of each cue and program it immediately." For outboard gear, Trarbach uses a TC Electronic 6000 for reverb; speaker processing is done with Meyer's Galileo system.

Additional personnel include Meredith Ries (associate scenic designer), David Bengali and Ted Boyce-Smith (associate projection designers), Andrew Bauer and Dan Vatsky (projection editing), Fred Gallo and John McPherson (production carpenters), Jeremy Wahlers (production electrician), David Spirakes (head electrician), Alex Brandwine (head carpenter and deck automation), Ryan McDonough and Keith Keene (advance flymen), Philip Lojo and Simon Matthews (production sound engineers), Asher Robinson (production video), Ben Keightley (video programmer), David Dignazio (head sound), Buist Bickley (production properties supervisor), Christopher DeLuise (property master), Tim McMath (assistant scenic designer), Ken Elliott (assistant lighting designer), Tracy Cowit (assistant sound designer), Jon Rodriguez (assistant carpenter), Jonathan Ramage (assistant electrician), and Matt Walsh (assistant sound).

Having earned overwhelmingly favorable reviews, *SpongeBob SquarePants* has weathered the winter months, traditionally the most difficult time on Broadway. As it sails into awards seasons, it's easy to imagine that the show will be very much in the mix.